

National and State Resource Concerns and Quality Criteria					
Natural Resource Concern	Description of Concern	National Quality Criteria	Missouri Quality Criteria	Measurement Units	Assessment Tools for Quality Criteria Evaluation
ANIMALS					
<i>Fish and Wildlife</i> Inadequate Food	Quantity and quality of food is unavailable to meet the life history requirements of the species or guild of species of concern	Food availability meets the life history requirements of the species or guild of species of concern.	Food availability meets the life history requirements of the species or guild of species of concern. Field or farm habitat value of 0.5 or greater for the appropriate MO Wildlife Habitat Appraisal Guide (WHAG) Species or Community Model is developed or maintained.	Non Measurable	<ul style="list-style-type: none"> • Visual assessment • Inventory of food species • Aerial photo analysis • MO Wildlife Habitat Appraisal Guide (WHAG) Community Model • National Biology Handbook
<i>Fish and Wildlife</i> Inadequate Cover/Shelter	Cover/shelter for the species or guild of species of concern is unavailable or inadequate. This includes lack of hiding, thermal, and/or refuge cover	The ecosystem or habit types support the necessary plant species in adequate diversity, abundance, and physical structure; and the connectivity of fish and wildlife cover is adequate to support, over time, the species or guild of species of concern.	The ecosystem or habit types support the necessary plant species in the kinds, amounts, and physical structure; and the connectivity of fish and wildlife cover is adequate to support, over time, the species of concern. Field or farm habitat value of 0.5 or greater for the appropriate MO Wildlife Habitat Appraisal Guide (WHAG) Species or Community Model is developed or maintained.	Non Measurable	<ul style="list-style-type: none"> • Visual assessment • Inventory of cover/shelter • Aerial photo analysis • MO Wildlife Habitat Appraisal Guide (WHAG) Community Model • National Biology Handbook

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<i>Fish and Wildlife</i> Inadequate Water	The quantity and quality of water is unacceptable for the species or guild of species of concern.	The quantity and quality of water meets the life history requirements of the species or guild of species of concern.	The quantity and quality of water meets the life history requirements of the species or guild of species of concern. Field or farm habitat value of 0.5 or greater for the appropriate MO Wildlife Habitat Appraisal Guide (WHAG) Species or Community Model is developed or maintained.	Non Measurable	<ul style="list-style-type: none"> • Stream Visual Assessment Protocol • Inventory of water supplies • Aerial photo analysis • MO Wildlife Habitat Appraisal Guides (WHAG) • National Biology Handbook
<i>Fish and Wildlife</i> Inadequate Space	Lack of required areas disrupts life history requirements of the species or guild of species of concern.	Adequate area and connectivity of areas meet life history requirements of the species or guild of species of concern. (Examples: staging areas for rest and feeding, lekking areas for breeding, migratory movement corridors)	Adequate area and connectivity of areas meet life history requirements of the species or guild of species of concern. (Examples: staging areas for rest and feeding, lekking areas for breeding, migratory movement corridors). Field or farm habitat value of 0.5 or greater for the appropriate MO Wildlife Habitat Appraisal Guide (WHAG) Species or Community Model is developed or maintained.	Non Measurable	<ul style="list-style-type: none"> • Visual assessment • Stream Visual Assessment Protocol • Inventory of space/areas • Aerial photo analysis • MO Wildlife Habitat Appraisal Guides (WHAG) • National Biology Handbook

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<i>Fish and Wildlife</i> Habitat Fragmentation	Habitat has insufficient structure, extent, and connectivity to provide ecological functions and/or achieve management objectives.	Fish and wildlife habitats are connected and are maintained sufficiently to support the species or guild of species of concern.	Fish and wildlife habitats are connected and are maintained sufficiently to support the species or guild of species of concern. Field or farm habitat value of 0.5 or greater for the appropriate MO Wildlife Habitat Appraisal Guide (WHAG) Species or Community Model is developed or maintained.	Non Measurable	<ul style="list-style-type: none"> Stream Visual Assessment Protocol Aquatic and terrestrial habitat evaluation procedures MO Wildlife Habitat Appraisal Guides (WHAG)
<i>Fish and Wildlife</i> Imbalance Among and Within Populations	Populations are not in proportion to available quantities and qualities of food (plants, predator/prey), cover/shelter, water, and space and other life history requirements.	Land and water use and management are consistent with direct population management activities conducted by fish and wildlife agencies.	Land and water use and management are consistent with direct population management activities conducted by fish and wildlife agencies. Field or farm habitat value of 0.5 or greater for the appropriate MO Wildlife Habitat Appraisal Guide (WHAG) Species or Community Model is developed or maintained.	Non Measurable	<ul style="list-style-type: none"> State fish and wildlife agency guidance and protocols MO Wildlife Habitat Appraisal Guide (WHAG) Community Model

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<i>Fish and Wildlife</i> Threatened and Endangered Fish and Wildlife Species – Fish and Wildlife Species Listed or Proposed for Listing under the Endangered Species Act	The site includes individuals, habitat or potential habitat for one or more fish or wildlife species listed or proposed for listing under the Endangered Species Act.	Populations and/or habitats of listed or proposed threatened and endangered fish and wildlife species and/or habitats they occupy are managed to maintain, increase or improve current populations, health, or sustainability.	Same as National	Non Measurable	<ul style="list-style-type: none"> • Client interviews • Site inventory • General Manual, 190, Part 410 • Missouri T&E Impact Matrix • Federal and state endangered species rules and regulations • Missouri Natural Heritage Database
<i>Fish and Wildlife</i> Threatened and Endangered Fish and Wildlife Species – Federal, State or Tribal Recognized Species	The site includes individuals, habitat or potential habitat for one or more fish or wildlife species that the State or Tribal government with jurisdiction, or the State Technical Committee, has identified as a species of concern. This includes species which have been identified as candidates for listing under the Endangered Species Act.	Populations and/or habitats of threatened and endangered fish and wildlife species and/or habitats they occupy are managed to maintain, increase or improve current populations, health, or sustainability.	Same as National	Non Measurable	<ul style="list-style-type: none"> • Client interviews • Site inventory • General Manual, 190, Part 410 • Missouri T&E Impact Matrix • Federal and state endangered species rules and regulations • Missouri Natural Heritage Database
<i>Fish and Wildlife</i> Threatened and Endangered Species, Declining Species, and Species of Concern	Populations and/or habitat quantity and quality have reached a level that one or more species are officially recognized as species of concern.	Populations and/or habitats of fish and wildlife species of concern are managed to maintain, increase or improve current populations, health, or sustainability	Same as National	Non Measurable	<ul style="list-style-type: none"> • Client interviews • Site inventory • T&E Impact Matrix • State endangered species lists • Missouri Natural Heritage Database

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<i>Domestic Animals</i> Inadequate Quantities and Quality of Feed and Forage	Total feed and forage is insufficient to meet the nutritional and production needs of the kinds and classes of livestock	Feed and forage, including supplemental nutritional requirements, are provided to meet production goals for the kinds and classes of livestock. Native grazers are factored into the total feed and forage balance computations.	Same as National	Non Measurable	<ul style="list-style-type: none"> • Measured inventory • National Range and Pasture Handbook • Grazing Lands Application (GLA) software • Nutritional Balance Program (NUTBAL) • NIRS/Nutritional Balance Profile Program (NUTBAL Pro) • Forage quality laboratory analysis • Graze 4 • MO-JS-AGRON-26/27
<i>Domestic Animals</i> Inadequate Shelter	Livestock are not protected sufficiently to meet the production goals for the kinds and classes of livestock	Artificial and/or natural shelter is provided to meet production goals for the kinds and classes of livestock.	Artificial and/or natural shelter is provided to meet production goals for the kinds and classes of livestock. Body weight and reproductive potential are maintained during critical climatic periods.	Non Measurable	<ul style="list-style-type: none"> • Visual assessment • Inventory of facilities and their capacities • Aerial photo analysis • National Range and Pasture Handbook

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<i>Domestic Animals</i> Inadequate Stock Water	The quantity, quality and distribution of drinking water is insufficient to meet the production goals for the kinds and classes of livestock	Sufficient water of acceptable quality is provided and adequately distributed to meet production goals for the kinds and classes of livestock. To reduce potential for water contamination, watering facilities are constructed or modified to minimize mortality to indigenous wildlife.	Sufficient water of acceptable quality is provided and adequately distributed to meet production goals for the kinds and classes of livestock. To reduce potential for water contamination, watering facilities are constructed or modified to minimize mortality to indigenous wildlife. Storage and delivery water rates are sufficient to meet use demand within one hour. Water supplies are managed to insure suitable quality and distribution.	Non Measurable	<ul style="list-style-type: none"> • Visual assessment • Inventory of distribution needs • Aerial photo analysis • National Range and Pasture Handbook
<i>Domestic Animals</i> Stress and Mortality	Animals exhibit illness or death from disease, parasites, insects, poisonous plants, or other factors	Land and water use and management are consistent with activities conducted to alleviate stress and mortality factors.	Same as National	Non Measurable	<ul style="list-style-type: none"> • Animal health/mortality alerts • State and local biosecurity protocols • State and local standards for animal disposal